

Detection of Polymorphisms in the Human 5-Lipoxygenase Gene**ABSTRACT**

The present invention is based at least in part on the discovery of polymorphisms within the 5-lipoxygenase gene which are included in a haplotype. Accordingly, the invention provides nucleic acid molecules having a nucleotide sequence of an allelic variant of a 5-LO gene. The invention also provides methods for identifying specific alleles of polymorphic regions of a 5-LO gene, methods for determining whether a patient has a more or less severe phenotype of an inflammatory disease or disorder such as asthma, methods for determining whether a patient will be more or less responsive to treatment with 5'LO inhibitors, forensic methods based on detection of polymorphisms within the 5-LO gene, and kits for performing such methods.